



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Orchard

Application No: 09/823,929

Filed: March 31, 2001

For: AN ARCHITECTURE AND RELATED
METHODS FOR EFFICIENTLY
PERFORMING COMPLEX ARITHMETIC

Assistant Commissioner For Patents
Washington, D.C. 20231

Examiner: Not Yet Assigned

Art Unit: 2121

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7 JANUARY 2003

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PRELIMINARY AMENDMENT

Sir:

Prior to examination of the above-referenced U.S. Patent Application, please enter this
amendment.

IN THE SPECIFICATION

Please replace the paragraph beginning on page 9, line 3 with the following:

Fig. 3 illustrates a block diagram of an example extensible, hyperpipelined summing module architecture 304, in accordance with one example embodiment of the present invention. As introduced above, the innovative architecture of summing module 304 is dynamically implemented within one or more CLB (202) blocks of an FPGA by an instance of summing module generator 222. In accordance with the illustrated example implementation of Fig. 3, summing module 304 is depicted comprising a dynamically generated, pipelined hybrid Wallace adder tree 306 of one or more stages (extensible to a hyperpipelined Wallace tree, i.e., 306A-N) which feeds a final, m-input adder stage 318. For example, the final m-input adder stage 318 may be a stage of two-input adders. As shown, the hybrid Wallace tree 306A-N is presented comprising a dynamically determined number of full-adders (fa) and associated registers (R) 308, half-adders (ha) and associated registers (R) 310 and registers (R) 312. Those skilled in the art will appreciate that each of the hybrid elements are readily implemented within one or more

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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application No.	09/823,929	
	Filing Date	March 31, 2001	
	First Named Inventor	John T. Orchard	
	Group Art Unit	2121	
	Examiner Name	Not Assigned	
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Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Gregory D. Caldwell, Reg. No. 39,926 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	January 7, 2003

CERTIFICATE OF MAILING/TRANSMISSION			
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Typed or printed name	Deborah L. Higham		
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